AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A network address conversion system for enabling an access to a specific node of a private network, having a private IP address and an internal port value, comprising:

a reservation unit which receives an access reservation demand from an external network node to access ~~a specific~~the specific node of the private network;

an external port value allocation unit which allocates a first external port value to the specific node, which is different from the internal port value of the specific node of the private network, in response to receiving the access reservation demand from the external node, and transmitting the first external port value to the external network node;

a mapping table which records a mapping relationship between the first external port value that is allocated and the internal port value of the specific node of the private network; and

an address conversion unit which converts the first external port value into ~~a private~~the private IP address of the specific node, when the external network node accesses the specific node by using the first external port value,

wherein the first external port value that is allocated to the specific node in response to receiving the access reservation demand from the external node is a new port value and said new port value is allocated when the access reservation demand is received.

wherein the address conversion unit receives a response packet from the external node that includes the new port value and converts the new port value to the internal port value such that the response packet is transmitted to the specific node with the internal port value.

2. (original): The system of claim 1, wherein the reservation unit deletes the first external port value allocated to the specific node, from the mapping table, when receiving an access reservation cancel demand for the specific node, from the external network node.

3. (previously presented): The system of claim 1, wherein the mapping table records the mapping relationship between the first external port value that is allocated and the internal port value of the specific node of the private network when the access reservation demand is received from the external network node.

4. (original): The system of claim 1, wherein the external network node includes a public IP address and a second external port value.

5. (currently amended): A network address conversion method for enabling access to a specific node of a private network, having a private IP address and an internal port value, comprising the steps of:

receiving an access reservation demand from an external network node to access the specific node of the private network;

allocating a first external port value to the specific node, which is different from the internal port value of the specific node of the private network, in response to receiving the access reservation demand from the external network node, storing said first external port value in a mapping table that records a mapping relationship between the first external port value that is allocated and the internal port value of the specific node of the private network, and transmitting said first external port value to the external network node; and

converting said first external port value into ~~a private~~the private IP address of the specific node, when the external network node accesses the specific node by using said first external port value,

wherein the first external port value that is allocated to the specific node in response to receiving the access reservation demand from the external node is a new port value and said new port value is allocated when the access reservation demand is received,

wherein a response packet is received from the external node that includes the new port value and the new port value is converted to the internal port value such that the response packet is transmitted to the specific node with the internal port value.

6. (original): The method according to claim 5, further comprising the steps of:

deleting said first external port value allocated to the specific node, from the mapping table when an access reservation cancel demand for the specific node having the allocated said first external port value, is received from the external network node.

7. (previously presented): The method of claim 5, wherein the storing said first external port value in a mapping table comprises recording a mapping relationship between the first external port value that is allocated and the internal port value of the private network when the access reservation demand is received from the external network node.

8. (original): The method of claim 5, wherein the external network node includes a public IP address and a second external port value.

9. (currently amended): A recording medium for recording a network address conversion method for enabling an access to a specific node of a private network, having a private IP address, the recording medium recording a program for executing on a computer, said network address conversion method comprising the steps of:

receiving an access reservation demand from an external network node to access the specific node of the private network;

allocating an external port value to the specific node, which is different from the internal port value of the specific node of the private network, in response to receiving the access reservation demand from the external network node, storing the external port value in a mapping table that records a mapping relationship between the first external port value that is allocated and the internal port value of the specific node of the private network, and transmitting the external port value to the external network node; and

converting the external port value into the private IP address of the specific node, when the external network node accesses the specific node by using the external port value,

wherein the first external port value that is allocated to the specific node in response to receiving the access reservation demand from the external node is a new port value and said new port value is allocated when the access reservation demand is received,

wherein a response packet is received from the external node that includes the new port value and the new port value is converted to the internal port value such that the response packet is transmitted to the specific node with the internal port value.

10-13. cancelled.

14. (previously presented): The recording medium of claim 9, wherein the storing said first external port value in a mapping table comprises recording a mapping relationship between the first external port value that is allocated and the internal port value of the private network when the access reservation demand is received from the external network node.

15-16. (canceled).